

## **REMARKS**

The applicants respectfully request reconsideration of this application as amended.

### **Status of Claims**

Claims 1, 3-10 and 12-25 are pending in this application. Claim 2 has been canceled. Claims 1, 9 and 20 have been amended. The amended claims are supported by the specification. No new matter has been added.

The specification has been objected to by the Examiner. (see Office Action 01/12/06 p. 1). Applicants presume that the specification is currently objected to based on a previous objection to the specification from the November 1, 2004 Office Action. The specification has been amended to provide that co-pending patent application, Application No. 09/539,434, has issued as U.S. Patent No. 6,674,717, and also correct any missing text. Support for the amendment is found in the specification as filed, therefore, no new matter is added.

### **35 U.S.C. § 103(a) Rejections**

Claims 1-10 and 12-25 stand rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,757,255 (hereinafter "Aoki") in view of U.S. Patent No. 6,219,713 (hereinafter "Ruutu").

Applicants respectfully assert that claim 1, as amended, is not obvious under 35 U.S.C. § 103(a) in view of the combination of Aoki with Ruutu.

Claim 1, as amended, states:

A method, comprising:

applying predictions of congestion conditions for a traffic stream in a communication network to increase an initial congestion window size for the traffic stream up to an advertised window size of a client receiving the traffic stream; and

applying dynamic bandwidth control to the traffic stream by modulating bandwidths of the traffic stream, independent of increasing the window size for the traffic stream, according to a capacity of a bottleneck in a communication path through which the traffic stream passes in the communication network.

(claim 1).

Aoki discloses a performance calculating unit that calculates an effective bandwidth based from the average value of the intermediate value of the round trip times and from a value of the maximum congestion window size. (Aoki, Col. 11, lines 33-37). Aoki discloses how the bandwidth can be calculated when the congestion window size is reduced by half. (Aoki, Figure 3). Thus, Aoki discloses calculating bandwidth dependent upon window sizing.

By contrast, Aoki does not disclose "applying dynamic bandwidth control to the traffic stream by modulating bandwidths of the traffic stream, independent of increasing the window size for the traffic stream, according to a capacity of a bottleneck in a communication path through which the traffic stream passes in the communication network." (claim 1). Also, the Office Action states that Aoki fails to teach that the initial congestion window is increased up to an advertised window size of a client receiving the traffic stream. (see Office Action 01/12/06 p. 2). Therefore, Aoki does not disclose or suggest the limitations stated in claim 1 and, in fact, explicitly teaches away from the limitations stated in claim 1, as amended.

Ruutu discloses a method and apparatus for adjusting a TCP sliding window using information regarding network conditions. In particular, the "source 330 is supposed to adjust its sliding window according to this advertisement, unless the

congestion window 360 maintained by the source 330 is smaller” (Ruutu, Col.4, lines 63-65; emphasis added). Indeed, Ruutu claims that the “size of the sliding window comprises the minimum of the window advertisement and a congestion window” (Ruutu, Claim 2). Ruutu discloses that either 1) the sliding window size is set equal to the advertising window size or 2) the sliding window size is set equal to the congestion window size. (see Ruutu, Col. 5, Ln. 10).

By contrast, Ruutu does not disclose “applying predictions of congestion conditions for a traffic stream in a communication network to increase an initial congestion window size for the traffic stream up to an advertised window size of a client receiving the traffic stream. (claim 1; emphasis added). Also, Ruutu does not disclose “applying dynamic bandwidth control to the traffic stream by modulating bandwidths of the traffic stream, independent of increasing the window size for the traffic stream, according to a capacity of a bottleneck in a communication path through which the traffic stream passes in the communication network.” (claim 1). Therefore, Ruutu does not disclose or suggest the limitations stated in claim 1 and, in fact, explicitly teaches away from the limitations stated in claim 1, as amended.

It is also respectfully submitted that Aoki does not suggest a combination with Ruutu, and Ruutu does not suggest a combination with Aoki. It would be impermissible hindsight to combine Aoki with Ruutu based on applicants' own disclosure.

Furthermore, even if Aoki and Ruutu were combined, such a combination would lack the following limitations of claim 1, as amended:

applying predictions of congestion conditions for a traffic stream in a communication network to increase an initial congestion window size for the traffic stream up to an advertised window size of a client receiving the traffic stream; and

applying dynamic bandwidth control to the traffic stream by modulating bandwidths of the traffic stream, independent of increasing the window size for the traffic stream, according to a capacity of a bottleneck in a

communication path through which the traffic stream passes in the communication network.

(claim 1).

Therefore, in view of the above distinction, neither Aoki nor Ruutu, individually or in combination, disclose each and every limitation of claim 1. As such, claim 1, as amended, is not rendered obvious by Aoki in view of Ruutu under 35 U.S.C. § 103(a).

Given that claims 3-8 depend from and include the limitations of claim 1, applicants submit that claims 3-8 are not obvious in view Aoki and Ruutu.

Likewise, independent claim 9, as amended, includes the limitation "setting an initial congestion window for a traffic stream in a communication network according to predicted congestion conditions for that traffic stream, increased up to an advertised window size of a client receiving the traffic stream." (claim 9). Independent claim 9 also includes the limitation "rate limiting the traffic stream, independent of increasing the window size for the traffic stream, to an effective bandwidth associated with a potentially congested bottleneck ..." (claim 9; emphasis added).

Therefore, in view of the above distinction, neither Aoki nor Ruutu, individually or in combination, disclose each and every limitation of claim 9, as amended. As such, claim 9, as amended, is not rendered obvious by Aoki in view of Ruutu under 35 U.S.C. § 103(a).

Given that claims 10-19 depend from and include the limitations of claim 9, applicants submit that claims 10-19 are not obvious in view Aoki and Ruutu.

Likewise, independent claim 20, as amended, includes the limitation "... to set an initial congestion window for a traffic stream transmitted over the at least one communication path according to predicted congestion conditions for that traffic stream, increased up to an advertised window size of a client receiving the traffic stream."

(claim 20). Independent claim 20 also includes the limitation "to rate limit the traffic stream, independent of increasing the window size for the traffic stream, to an effective bandwidth associated with a potentially congested bottleneck ..." (claim 20; emphasis added).

Therefore, in view of the above distinction, neither Aoki nor Ruutu, individually or in combination, disclose each and every limitation of claim 20, as amended. As such, claim 20, as amended, is not rendered obvious by Aoki in view of Ruutu under 35 U.S.C. § 103(a).

Given that claims 21-25 depend from and include the limitations of claim 20, applicants submit that claims 21-25 are not obvious in view Aoki and Ruutu.

In view of the foregoing amendments and remarks, applicants respectfully submit that all of the rejections have been overcome. Applicants reserve all rights with respect to the applicability of the doctrine of equivalents.

If there are any additional charges, please charge Deposit Account No. 02-2666.

Respectfully submitted,

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Dated: May 12, 2006

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